

CEA-tr-R-1402

Uncl.

ETUDE DES RÉACTIONS DES RADICAUX LIBRES, DANS
LE POLYTÉTRAFLUORETHYLENE IRRADIÉ. II. DETER-
MINATION DES CONSTANTES DES VITESSES DE REAC-
TIONS SUIVANTES: $RO_2 \rightarrow \dot{R} + O_2$ ET $\dot{R} +$
 $O_2 \rightarrow RO_2$. (Study of Reactions of Free
Radicals in Irradiated Polytetrafluoroethylene.
II. Determination of Reaction Rate Constants
According to: $RO_2 \rightarrow \dot{R} + O_2$ and $\dot{R} + O_2 \rightarrow RO_2$).
Yu. D. Tsvetkov (Ju. D. Cvetkov), Ya. (Ja.) S.
Lebedev, and V. V. Voevodskii (Voevodskij).
Translated into French from Vysokomolekulyarnye
Soedineniya, 1: 1634-42(1959). 28p. (Includ-
es original, 9p.).

cont'd

Studies of Free Radical Reactions in Irradiated
Polytetrafluoroethylene. II. Determination of the
Rate Constant of the Reactions $RO_2 \rightarrow R + O_2$ and
 $R + O_2 \rightarrow RO_2$, by Ru. D. Tsvetkov, Ia. S. Lebedev,
V. V. Vayevodskiy, 11 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 11, 1959, pp 1634-1642.

LA 60-16526

Sci

190,254

Apr 62

Vol IV, No 6

61-15744

Berlin, A. A. and Matveyeva, N. G.
POLYMERS WITH CONJUGATED BONDS IN THE
MACROMOLECULAR CHAINS. III. POLYAMINO-
QUINONES (Polimery s Sopryazhennymi Svyazami v
Tsapnyakh Makromolekuly. III. O. Polyaminokhinonakh).
Feb 61 [6]p. 2 refs. RTS 1705.
Order from LC or SLA ml\$1.80, ph\$1.80 61-15744

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959, v. 1, no. 11, p. 1643-1646.
Another translation is available from ATS \$7.50 as
ATS-83M40R [1960] 4p.

Polyaminoquinones were synthesized by the interaction
of chloranil with benzidine or hexamethylenediamine.
Polymerhomologous conversions are possible because
of the mobile halogen atoms in the quinone residues.
When reacted with metal salts, polyaminoquinones
form polymeric complexes, of apparently chelate
structure. The EPR spectra and the magnetic sus-
ceptibility of aromatic polyaminoquinones and their
(Chemistry--Organic, TT, v. 5, no. 8) (over)

- I. Quinones--Polymerization
- I. Berlin, A. A.
- II. Matveyeva, N. G.
- III. RTS-1705
- IV. Title: Polyaminoquinones
- V. Department of Scientific
and Industrial Research
(Gt. Brit.)

ATS/RS-2461
151665

Office of Technical Services

Polymers With Conjugated Bonds in Macro-
Molecular Chains. Part IV. Some Peculiarities
of Polymeric Compounds Containing
Hetero Atoms in a Conjugated Chain,
by L. A. Blyumenfel'd, A. A. Berlin, 5 pp.

RUSSIAN, per, Vysokomolekulyarnyy Soyedin,
Vol. 7, No. 11, 1955, pp 1647-1651.

ATS-84M40R

170/17-2002

188,897

Sci

Mar 62

Vol. IV, No 2

61-10912

1. Polymers--Solubility
1. Khazanovich, T. N.

Khazanovich, T. N.
THE EXCLUDED VOLUME IN THE THEORY OF
DEFORMATION OF SWELLED RETICULATED
(CROSS-LINKED) POLYMERS. [1961] [28]p. (4 figs.
omitted) 9 refs.
Order from LC or SIA mi\$2.70, pb\$4.60 61-10912

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1959 [v. 1] no. 11, p. 1659-1666.

The free energy of the network of a swelled polymer was
calculated by assuming as chain model the "pearl neck-
lace" earlier employed in studies on the volume effects
in polymer solutions (Zhur. Tekh. Fiz. 28: 1437, 1958).
The application of procedures from the theory of real
gases is valid provided the correlation between the rela-
tive fluctuations of segment pairs decreases sufficiently
rapidly with increasing distance between them. It is
shown on a particular example that such a decrease does
take place. The dimensionless free energy expansion
factor is proportional to the mean number of segments
(Chemistry--Organic, TT, v. 5, no. 11) (over)

Office of Technical Services

Razuvaev, G. A., Minsker, K. S. and others.
EFFECT OF AMINES ON STEREOSPECIFIC POLY-
MERIZATION OF PROPYLENE. [1960] 5p.
Order from ATS \$9.65 ATS-61M45R

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. I, no. 11, p. 1691-1695.

147,073

ATS-RJ-2663

(Chemistry--Organic, TT, v. 5, no. 5)

61-12312

1. Propenes--Polymerization
2. Amines--Chemical effects
- I. Razuvaev, G. A.
- II. Minsker, K. S.
- III. ATS-61M45R
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

Office of Technical Services

Plate, N. A., Prokopenko, V. V., and Kargin, V. A.
POLYMERIZATION OF CERTAIN MONOMERS
DURING DISPERSION OF INORGANIC SUBSTANCES.
[1962] 9p. (figs. omitted) 13 refs.
Order from OTS or SLA \$1.10

62-18818

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. I, no. 11, p. 1713-1720.

DESCRIPTORS: *Inorganic substances, *Polymerization,
Molecular structure, Chemical reactions, Exchange
reactions, Polymers, Production, Dispersion
hardening.

62-18818

I. Plate, N. A.
II. Prokopenko, V. V.
III. Kargin, V. A.

Office of Technical Services

Polycondensation Reactions in the Solid Phase. II. Polycondensation of Aminoheptanoic Acid in the Solid Phase in the Presence of Catalysts, by A. V. Volokhina, G. P. Kudryavtsev.
RUSSIAN, per, Vysokomolekul Soedin, Vol 1, No 11, 1959, pp 1729-1732.
Chem Trans Sv 3092

321,785

Sci - Chemistry
Apr 67

Copolymerization of Vinyl Acetate with
Crotonamide and Methylcrotonamide, by
S. N. Ushakov, L. B. Trakhanova.
RUSSIAN, per, Vysokomolekul Soedin, Vol 1,
No 12, 1959, pp 1754-1757.
ATS RJ-4959

Sci-Mat
Feb 69

373.776

Synthesis and Study of Stereoregular Copolymers of
Propylene and Isoprene, by N. S. Volkova, G. V.
Khutareva, 7 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 12, 1959, pp 1758-1763.

ATB-88A2R

ATS/RJ-2465

190,238

Sci

Apr 62

Vol IV, No 6

Studies in Coordination Chain Polymers

I. The Preparation of Polymers of bis-
(β -Diketones) and Metals, by V. V. Korshak,
Ye. S. Krongauz, et al, 9 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soedineniya, Vol I, No 12, 1959,
pp 1764-1771.

AET3-18M30R
ATJ/RJ-2441

Sci
Mar 62
Vol IV, No 2

188,894

Synthesis and Study of Stereoregular Copolymers of
Propylene and Isoprene, by N. S. Volkova, G. V.
Khutareva, 7 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 12, 1959, pp 1758-1763.

ATE-88A2R

Sci

Apr 62

Vol IV, No 6

Berlin, A. A. [Tcherkashin, M. I.] and others.
POLYMERS WITH CONJUGATED BONDS IN THE
MACROMOLECULAR CHAIN. V. SYNTHESIS AND
SOME PROPERTIES OF POLYARYLVINYLENES.
17 Mar 60, [9]p. 2 refs.

Order from LC or SLA ml\$1.80, ph\$1.80 60-18468

Trans. of Vysokomolekulyarnyye Soedineniya (USSR)
1959, v. 1 [no. 12] p. 1817-1820.

Phenylacetylene and p-diethynylbenzene are capable of polymerization and copolymerization on heating at 150 to 400°C or at 70°C in the presence of complexes of an aluminum trialkyl and $TiCl_4$ or $TiCl_3$. On increasing the polymerization temperature of phenylacetylene from 150 to 300°C, there is an increase in yield, molecular weight and viscosity of polyphenylvinylene; at the same time the polymer color changes from yellow to brown (300°C) and black (400°C). Polymers of phenylacetylene and p-diethynylbenzene and their copolymers have narrow EPR signals, a large concentration of paramagnetic particles (10^{17} to 10^{19} particles/g) and a high value of (Chemistry--Organic, IT, v. 5, no. 3) (over)

60-18468

1. Acetylenes--Polymerization
2. Title: Vinylenes
3. Title: Conjugated bonds
- I. Berlin, A. A.
- II. Tcherkashin, M. I.
- III. Title: Synthesis...

142,989

Office of Technical Services

TT-64-10200

Guzev, V. V., Morozov, V. I., Starkman, B. P.,
and Rylov, E. E.
AUTOMATIC APPARATUS FOR THE TURBIDOMETRIC
TITRATION OF POLYMER SOLUTIONS. [1963] 7p
(figs refs omitted)
Order from OTS, SLA, or ETC \$1.10 TT-64-10200

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1959, v. 1, no. 12 [p. 1840-1843].

(Chemistry--Analytical, TT, v. 11, no. 12)

I. Guzev, V. V.
II. Morozov, V. I.
III. Starkman, B. P.
IV. Rylov, E. E.

Office of Technical Services

Studies on the Spherulite Structure of Polymers.
I. Degradation of Polymer Spherulites Under
the Action of Fast Electrons, by P. V. Kozlov,
Pan-tun Li, N. F. B Bakayev, 8 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyed, Vol I, No 12, 1959, pp 1848-1859.

ATB-89142R

PP-1848-1859 - FILE/KJ-2449
192,643

Sci
Vol IV, No 7
Apr 62

13 069

In-1

KABANOV V. A., KARGIN V. A., SERGEEV G. V.,
ZUBOV V. P.

Electron resonance study of polymerization in the acrylonitrile:
magnesium system obtained by molecular beam condensation

Vysokomol. Soed., 1, No. 12, 1859-1861 (1959)

379/60 - English

E u r a t o m

The Synthesis of Thermoreactive Copolymers of
Vinyl Acetate and Vinyl Alcohol with
Methylcrotonamide, by S. N. Ushakov,
E. M. Lavrent'eva.
RUSSIAN, per, Vysokomolekul Soedin, Vol 1,
No 12, 1959, pp 1862-1867.
ATS RJ-4958

Sci-Hat
Feb 69

373,775

BD 12/60₂ .

(SF - 1832).

60th Birthday of S. M. Lipatov, ~~54~~RUSSIAN, per, Vysokomolekularnyye Soyedineniya, No 12,
1959, pp 1868-1869.

*JPRS 1662

USSR

Biog

27 Apr 61

Eleventh All-Union Conference on High-Molecular-
Weight Compounds, by N. F. Bakeyev, 23 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol I, No 1, 1959, pp 1877-1891.

JPRS 3552

Sci - Phys

Oct 60

VYSOKOMOLEKULYARNYE SOEDINENIYA
(Polymer Science USSR - monthly)
Translation begins with 1960, Vol. 1
Lag time: ca. 9 months
Order from: Pergamon Press, Ltd.,
Headington Hill Hall
Oxford, OX3, 0EW
Annual subscription: £ 60.00
2-year price : £ 108.00
Single issues : £ 5.50
Back numbers can be supplied.

or
Order from: Pergamon Press Inc.,
Maxwell House,
Fairview Park,
Elmsford, N.Y. 10523
Annual subscription: \$ 150.00
2-year price : \$ 270.00
Single issues : \$ 14.00

Russ

NBS S-463104-68-D (TD 2 weeks) R-8947-D

28 Nov 67

The synthesis and basic properties of polyacrylate
esters of different degrees of polymerization

By: A.A. BERLIN

From: Vysokomolekulyarnye Soedineniya Vol 2, No 3,
1960: 411-416 (6 pp)

Russian -- est for wds:

Please translate and type 1 original and 1 carbon copy.
Document can be cut.

Diffusion Coefficient and the Nature of
Diffusing Molecules, Pt. I, by R. M.
Vasenin.

RUSSIAN, per, Vysokomolekulyarnye Soediniya,
Vol 2, 1960, pp 57-63.
SLA TT-66-10794

331, 506

Sci - Chem
Jul 67

62-13807

Korshak, V. V., Polyakova, A. M., and
Suchkova, M. D.
SYNTHESES DES COMPOSES VINyliques DU
PLOMB ET RECHERCHE DE LEUR POLYMERI-
SATION [The Synthesis of Vinyl Compounds of Lead
and a Study of their Polymerization] tr. by Szyzszman.
[1961] [22] p. 10 refs. CEA Trans. R 1413 (text in
French).
Order from GTS or SLA \$2.60 62-13807

Trans. in French of Vysokomol[ekulyarnye] Soed-
[ineniya] (USSR) 1960 [v. 2] no. 1, p. 13-19.

DESCRIPTORS: Synthesis, *Vinyl radicals, Dioxides,
Decomposition, *Polymerization, Copolymerization,
Styrenes, Ethyl radicals *Lead compounds, Methyl
radicals.

(Chemistry--Organic, TT, v. 7, no. 8) (over)

- I. Korshak, V. V.
- II. Polyakova, A. M.
- III. Suchkova, M. D.
- IV. CEA-tr-R1413
- V. Commissariat à l'Énergie
Atomique (France)

Office of Technical Services

Radiation Polymerization of Isoprene, Pt. ¹ 2.,
by V. S. Ivanov, M. A. Sokolova, 3 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol. II, No 1, 1960, pp 35-37.

AT

ATS-02M45R

203, 221

Sci

Jun 62

Deformation Properties of Polymers,
by Ye. Ye. Glukhov, A. A. Gorikina,
A. V. Shelion, 9 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyedineniya, Vol II, No 1, 1960,
pp 33-45.

CTS 62-10476
ATS-53M40R
ATI/RS-2465

Sci
Mar 62
Vol IV, No 2

188, 898

Kabin, S. P. and Usyarov, O. G.
APPLICATION OF THE ULTRASONIC METHOD FOR
DETERMINATION OF COMPONENTS CONCENTRA-
TIONS IN MIXTURES OF POLYETHYLENE WITH
POLYPROPYLENE AND IN ETHYLENE/PROPYLENE
COPOLYMERS. [1961] 4p. 7 refs.
Order from OTS or SLA \$1.10 61-14972

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960 [v. 2] no. 1, p. 46-49.

DESCRIPTORS: *Polymers, *Ethylenes, *Propenes,
Copolymerization, Ultrasonics, Determination,
Mixtures.

(Materials--Plastics, TT, v. 6, no. 1)

61-14972

I. Kabin, S. P.
II. Usyarov, O. G.

161775

Office of Technical Services

Korshak, V. V., Vinogradova, S. V., and
Lebedeva, A. S.
HETEROCHAIN POLYESTERS. XXVI. SOME LAWS
GOVERNING POLYESTERIFICATION AT THE INTER-
FACE BOUNDARY. 27 Apr 60 [11]p. 13 refs.
Order from LC or SLA ml\$2.40, ph\$3.30 60-18472

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 [no. 1] p. 61-66.

Some laws were investigated governing the polyesterifi-
cation at the interface boundary. The yield of poly-
ester and its reduced viscosity increase with an in-
crease of the intensity of stirring of the reaction mix-
ture. The highest molecular weight of polyester was
obtained on adding a solution of isophthaloyl chloride in
p-xylene to an aqueous-alkaline solution of diene (0.1M
concentration) during 11 minutes at about 20°C, when
working with solutions of the starting substances with
the same concentration. (See also 60-12618)

(Chemistry--Organic, TT, v. 3, no. 3)

60-18472

1. Carboxylic acids--
Condensation
2. Phenols--Condensation
3. Esters--Polymerization
4. Title: Hetero-chain polymers
5. Title: Esterification
- I. Korshak, V. V.
- II. Vinogradova, S. V.
- III. Lebedeva, A. S.
- IV. Title: Some...

143,027

Office of Technical Services

Kolesnikov, H. S. and Matveyeva, N. G.
CARBOCHAIN POLYMERS AND COPOLYMERS. XX.
ON THE POLYMERIZATION AND COPOLYMERIZA-
TION OF 1-FLUORO-1,1-DICHLORO- AND 1,1-DI-
FLUORO-1-CHLORO-PROPYLENES-2. [1960] 6p.
13 refs.

Order from LC or SLA m\$1.80, ph\$1.80 60-18470

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 1, p. 82-84.

The synthesis, polymerization and copolymerization of
1-fluoro-1,1-dichloro- and 1,1-difluoro-1-chloropro-
pylene-2 were accomplished by the dehydrochlorination
from 1-fluoro-1,1,3-trichloro-propane and 1,1-di-
fluoro-1,3-dichloro-propane, respectively. The co-
polymers of 1-fluoro-1,1-dichloro- and 1,1-difluoro-
1-chloropropylene with styrene have glass transition
temperatures higher than the glass transition tempera-
ture of homopolymers which is explained apparently by
the formation of fluorine-hydrogen bonds between the
polymer chains. (See also 60-10042, 60-22806)

60 18470

- I. Propenes--Polymerization
- I. Kolesnikov, H. S. G. S.
- II. Matveyeva, N. G.
- III. Title: Polymerization...

143,028

NEL 11-1-60

Office of Technical Services
(Chemistry--Organic, TT,
v. 5, no. 3)

Investigation into the Mechanical Properties of
Polymers Undergoing Irradiation, Parts I and II,
by M. A. Mekul'skiy.
RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol II, 1960, pp 103-118.

*AEC

Phys
May 6:

CEA-tr-R-1400 Uncl.

PROCESSUS CINETIQUES DANS UNE SUBSTANCE
IRRADIEE. (Kinetic Processes in Irradiated
Substances). M. A. Mokul'skii. Translated
into French from Vysokomolekulyarnye
Soedineniya, 2: 119-29(1960). 34p.
(Includes original, 11p.).

Radiation Effects; Translations MC-40

C-40 NP NSA Dep.(mc); \$3.60(fs), \$1.22(mf)
JCL or OTS

N-3

Bresler, S. Ye. and others.
DEGRADATION OF STEREOREGULAR POLYPROPYLENE. [1960] 5p. 3 refs.
Order from SLA m\$1.80, ph\$1.80 60-18426

Trans. of [Vysokomolekulyarnyye Soyedineniya] (USSR) 1960 [v. 2] no. 1, p. 130-132.

Experiments showed that polypropylene which is quite thermo-stable in a vacuum, undergoes an intense oxidative degradation on heating in the air. In the presence of oxygen there is observed no difference in degradation of the amorphous and crystalline polypropylene. Residues of titanium oxide which can be present in commercial samples of polypropylene obtained by means of Ziegler catalysts have no effect on polymer degradation. In order to inhibit the oxidative degradation of polymers it is necessary to use antioxidants which act weakly at room temperature. Di-(4-oxyphenyl) sulfide especially strongly inhibits the oxidative degradation of polypropylene. (Author)

(Chemistry--Organic, TT, v. 5, no. 3)

60-18426

1. Propene polymers--
Deterioration
2. Propene polymers--Oxidation
1. Bresler, S. Ye.

143,042

Office of Technical Services

60-18469

Zil'berman, Ye. N. and Teplyakov, N. M.
SYNTHESIS OF COMPLEX POLYESTERS FROM
DINITRILES AND GLYCOLS VIA POLYIMINOESTER
HYDROCHLORIDES. 20 Apr 60 [7]p. 4 refs.
Order from LC or SLA mi\$1.80, ph\$1.80 60-18469

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 [no. 1] p. 133-135.

By interaction of dinitriles of alkanedioic and aralkane-
dioic acids with glycols in the cold and in the presence
of hydrogen chloride, there are formed polyiminoester
hydrochlorides that are transformed by hydrolysis into
complex polyesters having terminal nitrile and hydroxy
groups. Eight complex polyesters with molecular
weights of 1000-1700 were synthesized. (Author)

(Chemistry--Organic, TT, v. 3, no. 3)

1. Esters--Synthesis
 2. Cyanides--Chemical reactions
 3. Glycols--Chemical reactions
- I. Zil'berman, Ye. N.
 - II. Teplyakov, N. M.

143,029

Office of Technical Services

Plasticization of Poly(Vinyl Alcohol)-
Styrene and Polyacrylic Acid-Styrene Graft
Copolymers, by V. A. Kargin.
RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol 2, No 1, 1960, pp 166-173.
NTC-71-11535-11I

Feb 72

TT-63-23754

Uskov, I. A.

THE FILLING OF POLYMETHYLMETHACRYLATE
WITH AMINATED BENTONITE BY DIRECT ADDITION
INTO THE MONOMER: THE EFFECT OF AMINATED
BENTONITE DISPERSION IN THE MONOMER ON THE
STRENGTHENING OF PMMA; POLYMERIZATION OF
MMA WITH DISPERSED SODIUM BENTONITE

(Napolnenie Polimetilmetakrilata Aminirovannym
Bentonitom, Vvoshimym Neposredstvenno v Monomer;
Vliyaniye Dispergirovaniya Aminirovannogo Bentonita v
Srede Monomera na Usileniye Polimetilmetakrilata;
Polimerizatsiya MMA s Uchastiyem Dispergirovannogo
Natrievogo Bentonita) tr. by R. J. Zatorski. Pts. 1-3 of
Filled Polymers. [1993] [25]p (foreign text included)
22refs [CSIRO] Trans. no. 6170
Order from GTS, SLA, or ETC \$2.60 TT-63-23754

Trans. of Vsesoyuznyy Nauchnyy Tsentr (USSR)
1960, v. 2, no. 1, p. 926-930, 728-730, 926-930
(Abstract available)
(Materials-Plastics, TT, v. 12, no. 2) (over)

I. Uskov, I. A.
II. Title: Effect...
III. Title: Filled...
IV. Title: Polymerization...
V. CSIRO Trans-6170
VI. Commonwealth Scientific
and Industrial Research
Organization (Australia)

Bibliography

62-12571

Uskov, I. A.
FILLED POLYMERS. I. FILLING OF POLY(METHYL
METHACRYLATE) BY ANIMATED BENTONITE,
ADDED DIRECTLY TO THE MONOMER. [1961] 6p.
Order from ATS \$9.85 ATS-69P58R

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2, no. 2, p. 200-204.
An abstract trans. is available from LC or SLA
mi\$1.80, ph\$1.80 as 60-23835, AID-60-27, 15 July 60,
1p.

DESCRIPTORS: *Methyl radicals, *Acrylic resins,
*Bentonite, Polymerization, Polymers

For abstract see Technical Translations 4: 682, 1960.

(Materials--Plastics, TT, v. 7, no. 10)

I. Uskov, I. A.
II. Title: Filling ...
III. ATS-69P58R
IV. Associated Technical
Services, Inc.,
East Orange, N. J.

Office of Technical Services

Kargin, V. A., Kabanov, V. A., and Zubov, V. P.
SYNTHESIS OF ISOTACTIC POLY(METHYL METHA-
CRYLATE) BY POLYMERIZATION OF THE FROZEN
MONOMER. [1960] 3p.
Order from ATS \$3.60

ATS-35M47R

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 2, p. 303-305.

148,670

(Chemistry--Organic. TT, v. 5, no. 7)

61-12691

1. Acrylic resins--Synthesis

I. Kargin, V. A.

II. Kabanov, V. A.

III. Zubov, V. P.

IV. ATS-35M47R

V. Associated Technical
Services, Inc., East
Orange, N. J.

ATS-RS-2680

Office of Technical Services

Mechanism of Oxidation of Cellulose and of Its
Approximate Models by Atmospheric Oxygen, by
O. P. Golova.
RUSSIAN, per, Vysokomolckulyarnye Soedineniya, Vol 2,
No 3, 1960, pp 337-340.
*NTIS TT 71-51002

July 71

Korotkov, A. A. and Chesnokova, N. N.
CATALYTIC COPOLYMERIZATION OF STYRENE
WITH BUTADIENE. [1961] 14p. 12 refs.
Order from OTS or SLA \$1.60 61-14970

Trans. of Vysshomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 (no. 3) p. 365-374.

DESCRIPTORS: Catalysts, *Copolymerization,
*Styrenes, *Butadienes, Polymers, Chemical reactions.

(Chemistry--Organic, TT, v. 6, no. 1)

61-14970

I. Korotkov, A. A.
II. Chesnokova, N. N.

161773

Office of Technical Services

Korshak, V. V., Gribova, I. A. and others.
SYNTHESIS AND POLYMERIZATION OF ARYL
PHOSPHONITRILES AND ALKYL PHOSPHONITRILES.
[1961] 9p. 7 refs.

Order from OTS or SLA \$1.10

61-19740

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 3, p. 377-385.

Abstract trans. available from LC or SLA as 60-23844,
AID-60-16, 19 July 60, 1p.

DESCRIPTORS: *Phosphonitriles, Synthesis, Polymeri-
zation, *Polymers, Phosphorus compounds, Phenyl
radicals, Alkyl radicals.

For abstract see Technical Translations 4: 657, 1960.

(Chemistry--Organic, TT, v. 6, no. 1)

61-19740

I. Korshak, V. V.
II. Gribova, I. A.
III. Translations, New York

161852

Office of Technical Services

Investigation of the Possibility of Preparing
Unsaturated Compounds of Cellulose by the Chugaev
Reaction, by A. I. Polyakov.

RUSSIAN, per, Vysok Soedin, Vol II, No 3, 1960,
pp 386-389.

NLL(LOAN)Ref: 5828.4 1963 (5440)

Sci-Chem
April 64

The Synthesis and Basic Properties of
Plyacrlate Esters of Different Degrees
of Plymerization, by A. A. Berlin,
T. Ya. Kefeli, Yu. M. Filippovskaya,
Yu. M. Silvergin.

RUSSIAN, per, Vysokomolekulyarnye
Soedineniya, Vol 2, No 3, 1960, PP. 411-
16

NTC 69-10641-07C

Sci-Chem

Kozlov, P. V. and others.

STUDIES IN THE SPHERULITE STRUCTURE OF
POLYMERS. III. A STUDY OF THE MICROSPHERU-
LITE STRUCTURE OF POLYMERS BY ETCHING.

[1960] 12p. 11 refs.

Order from SLA ml\$2.40, ph\$3.30

60-18427

Trans. of [Vysokomolekulyarnyye Soyedineniya] (USSR.)
1960 [v. 2] no. 3, p. 421-426.

On the basis of the etching method used there were shown optical and electron microscopic studies of structures of microspherulites occurring in films of polyethylene sebacate obtained from solution. The separate coexistence in the microspherulite of polyethylene sebacate of crystalline and amorphous phases was established. The crystalline phase of the polymer is constituted of a helical-ribbon shaped packet of polymer chains composing the structural elements of the microspherulites themselves. The amorphous phase of the polymer consists of globular shapes not (over)

60-18427

1. Polymers--Crystal structure
2. Title: Spherulite structure
- I. Kozlov, P. V.
- II. Title: Study...

143,041

Office of Technical Services

A Study in the Field of Organophosphorus Polymers.
IX. Polycondensation Reaction of Phosphonic Acid
Dichlorides With Dihydroxy Compounds, by V. V.
Korshak, et al.

RUSSIAN, per, Vysokomolekulyarnye Soyedineniya,
Vol II, 1960, pp 427-432.

ATS 50841R

AT-16564282

Sci - Chem

Kolesnikov, G. S., Suprun, A. P. and others.
CARBON CHAIN POLYMERS AND COPOLYMERS.
XXL COPOLYMERS BASED ON BICYCLO(2.2.1)
HEPTA-2,5-DIENE AND 1,2,3,4,7,7-HEXACHLORO-
BICYCLO(2.2.1)HEPTA-2,5-DIENE. [1961] 5p.
Order from ATS \$6.75

ATS-19N52R
61-20642

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2, no. 3, p. 451-455.

DESCRIPTORS: Polymerization, Copolymerization,
Condensation reaction, Polymers, Cyclic compounds,
Chlorine compounds

(Chemistry--Organic, TT, v. 6, no. 4)

61-22936

- I. Kolesnikov, G. S.
- II. Suprun, A. P.
- III. Title: Copolymers ...
- IV. ATS-19N52R
- V. Associated Technical
Services, Inc., East
Orange, N. J.

177764

ATS-RJ-3073

Office of Technical Services

11 009

US-14

KISHCH L., DOBE Ya.

Graft copolymerization of methyl methacrylate and styrene
on gelatin induced by ionizing radiation

Vysokomolekulyarnye Soedineniya, 2, No. 3, 464-465 (1960)

ATS-91M41R. \$ 2.10 - English

E u r a t o m

ATC/KS

Levoglucozan Polyethers. I. Polymerization of Leroglucozan
and its Ethers, by V. V. Korshak.

RUSSIAN, per, Vysokomolckulyarnye Soedineniya, Vol 3, No 3
1961, pp 477-485.

*NTIS TT 71-51003

July 71

Interfacial Polycondensation of Diamine Salts
and Dicarboxylic Acid Chlorides, by
L. B. Sokolov, T. V. Kudim, 4 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyed, Vol II, No 4, 1960, pp 481-484.

ATS-24442R

ATE/RJ-2476

Sci
Vol IV, No 7
Apr 62

192,654

HEAT RESISTANCE OF CHELATE (METAL -
COORDINATION) POLYMERS. 7 Nov 60, 3p. AID
rept. 60-83, AD-246 712.

Order from LC or SLA m\$1.80, ph\$1.80 61-13991

Abstract trans. of Vysokomolekulyarnyye Soyedini-
eniya (USSR) 1960, v. 2, no. 4, p. 492-507 and 526-
528; no. 5, p. 662-672 and 701-792.

Complete translations are available from ATS:

- Pt. 1. \$9.50 as ATS-45M42R [1960] 7p.
Pt. 2. \$12.50 as ATS-44M42R [1960] 10p.
Pt. 3. \$13.95 as ATS-13M43R [1960] 10p.
Pt. 4. \$6.00 as ATS-32M42R [1960] 4p.
Pt. 5. \$3.00 as ATS-14M43R [1960] 2p.

Contents: PP 492-507 - 7 - ATS/RS-2424

- I. Study in the Field of Coordination of Polymers.
II. On Some Metal-Containing Polymers of Quini-
zarin, by V. V. Korshak and others
(Chemistry: Organic, TT, v. 5, no. 4) (over)

61-13991

- I. Chelate compounds--
Thermal properties
2. Title: Coordination polymers
1. AID-60-83
- II. Air Information Div.,
Washington, D. C.
- III. Title: Investigation of
Coordination-chain
Polymers, Pts. 2-4.
- IV. AD-246 712

143,339

PP 492-507 - ATS/RS-2424

Office of Technical Services

2. Study in the Field of Coordination Polymers
III. On the Coordination of Polymers Based on
Bis-(β -hydroxyquinolyl)-methane, by V. V. Kor-
shak and others
3. Study in the Field of Coordination Polymers
IV. Synthesis of Polymers Based on Aromatic
Bis- β -diketones) with Metals, by V. V. Korshak
and others
4. Synthesis of Polymers Based on β -chlorovinyl
Ketone by A. N. Neameyanov and others
5. Synthesis of Chelate Polymers, by N. A. Glukhov
and others

PB-

61-13991

Investigation of Coordination Polymers III.
Coordination Polymers of BIS (8-HY-Droxyguinolyl)
Methane, by V. V. Korshak, S. V. Vinogradova,
T. M. Babchinitser.

RUSSIAN, per, Vysokomolekulyarnyye Soyed,
Vol II, No 4, 1960, pp 498-507.

ATS-44442R
ATS/RS-242H

Sci
Vol IV, No 7
Apr 62

192, 641

62-10980

Slovokhotova, N. A., Sadovskaya, G. K., and
Kargin, V. A.
INFLUENCE OF FAST ELECTRONS ON THE
STRUCTURE OF POLYETHYLENETEREPHTHALATE.
[1961] (2 figs. omitted) 12 refs.
Order from OTS or SLA \$1.10

62-10980

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1961, v. 3, no. 4, p. 515-520.

DESCRIPTORS: *Electrons, Crystal structure,
*Polymerization, *Ethylenes, *Phtalates, Isomeric
transitions, Ionization, *Radiation effects, Phenyl
radicals, Radiochemistry.

Polyethyleneterephthalate on irradiation with fast
electrons goes over from the crystalline to the amor-
phous state. This amorphisation is associated with
the isomerization of certain portions of the polymer
(Nuclear Physics and Nuclear Chemistry, TT, v. 8,
no. 6) (over)

I. Slovokhotova, N. A.
II. Sadovskaya, G. K.
III. Kargin, V. A.

Office of Technical Services

Andrianov, K. A., Gribanova, O. I., and others.
 STUDY OF THE POLYCONDENSATION REACTION
 OF POLYETHYL-ENETEREPHTHALATE AND
 POLYORGANOETHOXYSILOXANES. 7 Nov 60, 2p.
 AID rept. 60-82; AD-246 711.
 Order from LC or S.A. ml\$1.80, ph\$1.80 61-13990

Abstract trans. of Vysokomolekulyarnyye Soyedineniya (USSR) 1960, v. 2, no. 4, p. 521-525.

An organosilicon polymer with active ethoxy groups was synthesized by heterocondensation of methyl phenyl ethoxysilane chloride with phenyl triethoxysilane in a molar ratio of 1:0.5. The molecular weight of the polymer was 600-800, and the content of the ethoxy groups was 22.50%. The structure was assumed to be linear, with ethoxy groups situated both in the ends of the chain and as occasional side substituents. These active groups were then brought in contact with active hydroxyl end groups of polyethyl- (Materials-Patna, TT, v. 5, no. 4) (over)

61-13990

1. Silicones--Polymerization
2. Phthalates--Polymerization
3. Condensation reactions
4. Varnishes--Development
5. Title: Block polymers
6. Title: Graft polymers
- I. Andrianov, K. A.
- II. Gribanova, O. I.
- III. AID-60-82
- IV. Air Information Div.,
Washington, D. C.
- V. AD-246 711

143,340

Office of Technical Services

Synthesis of Polymers From β -Chlorovinyl
Ketones, by A. N. Nesmeyanov, M. I. Rybinskaya,
G. L. Slonimskiy, 4 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyedineniya, Vol II, No 4, 1960,
pp 526-528.

ATS-32442R

Sci
Vol IV, No 7
Apr 62

192,652

61-23380

Bykhovskii, V. K. and Minsker, K. S.
THE ROLE OF ELECTRONIC SURFACE IMPER-
FECTIONS IN HETEROGENEOUS CATALYTIC POLY-
MERIZATION. I. THE POLYMERIZATION OF THE
ALFINE TYPE, tr. by I. Gawronska. Dec 60, 9p.
20 refs. Courtaulds Misc. Lit. 3238; [DSIR LLU]
M. 2950.

Order from OTS or SLA \$1. 10

61-23380

Trans. of Vysokomol [ekulyarnye] Soedineniya (USSR)
1960, v. 2, no. 4, p. 529-534.

DESCRIPTORS: *Polymerization, *Catalysts, Alkyl
radicals, Chlorides, Alcohols, Alkali metals, Ethyl-
enes, Crystals, Electrons, Surfaces, Deformation.

The mechanism of heterogeneous catalytic polymeri-
zation is examined from a novel viewpoint. The active
centers of the catalyst surface are likened to electron
(Chemistry--Organic, TT, v. 6, no. 10) (over)

- I. Bykhovskii, V. K.
- II. Minsker, K. S.
- III. Title: Polymerization ...
- IV. Courtaulds ML-3238
- V. DSIR LLU M. 2950
- VI. Courtaulds Ltd.
(Gr. Brit.)

Office of Technical Services

Minsker, K. S. and Bykhovskii, V. K.
THE ROLE OF ELECTRONIC SURFACE IMPER-
FECTIONS IN HETEROGENEOUS CATALYTIC
POLYMERIZATION. II. SYSTEMS OF THE TYPE OF
ZIEGLER-NATTA CATALYSTS, tr. by I. Gawronska.
2 Mar 61, 7p. 31 refs. Courtaulds Misc. Lit. 3280;
[DSIR LLU] M. 3181.

Order from OTS or SLA \$1.10

61-28143

Trans. of Vysokomol[ekulyarnye] Soedinenia (USSR)
1960, v. 2, no. 4, p. 535-540.

DESCRIPTORS: Catalysts, *Polymerization, Crystals,
Impurities, Color centers, Lattices, Crystal structure,
Alkali metal compounds, Halides, Electrons.

The mechanism of heterogeneous catalytic polymeri-
zation on catalysts of the Ziegler-Natta type was ex-
amined from a novel viewpoint. The catalytic activity of
(Chemistry--Physical, TT, v. 6, no. 11) (over)

61-28143

I. Title: Ziegler-Natta
catalysts.

1. Minsker, K. S.

II. Bykhovskii, V. K.

III. Title: Systems ...

IV. Courtaulds ML-3280

V. DSIR LLU M. 3181

VI. Courtaulds Ltd. (Gt. Brit.)

10-702

Office of Technical Services

61-27557

Wang, Fo-shung, Dolgoplosk, B. A., and
Erusalimskii, B. L.
POLYMERIZATION OF ISOPRENE BY ORGANO-MAG-
NESIUM COMPOUNDS. Tr. by I. Gawronska.
24 Jan 61, 6p. 6 refs. Courtaulds Misc. Lit. 3267;
[DSIR LLU] M. 3083.
Order from OTS or SLA \$1. 10 61-27557

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2, no. 4, p. 541-545.

DESCRIPTORS: *Isoprene, Polymerization, *Magne-
sium compounds, Microstructure, Chemical bonds,
Molecular association, *Metal-organic compounds.

It has been found that organo-magnesium compounds,
free of ether, produce the polymerization of isoprene
at higher temperatures. Polyisoprene formed under
these conditions is constituted mainly of 3, 4 links. The
(Chemistry--Organic, TT, v. 6, no. 10) (over)

I. Wang, Fo-shung
II. Dolgoplosk, B. A.
III. Erusalimskii, B. L.
IV. Courtaulds ML-3267
V. DSIR LLU M. 3083
VI. Courtaulds Ltd. (Gr. Brit.)

Office of Technical Services

Santo, I. and Gal, K.
GRAFTING OF VARIOUS MONOMERS TO POLY(VI-
NYL ALCOHOL) FILMS UNDER THE ACTION OF
X-RAYS. [1961] 3p.
Order from ATS \$4.00 ATS-92N54R

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2, no. 4, p. 546-548.

DESCRIPTORS: *Monomolecular films, Vinyl alcohol.
Alcohols, Films, Preparation, X-rays.

(Physics--Molecular, TI, v. 7, no. 4)

62-12090

- I. Santo, I.
- II. Gal, K.
- III. ATS-92N54R
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

Office of Technical Services

Carbon-Chain Polymers and Copolymers,
Part 23. Copolymerization of Mallyl Deriva-
tives of Germanium, Tin, and Silicon With
Styrene and Methyl Methacrylate in the
Presence of Benzoyl Peroxide, by G. S.
Kolesnikov, S. L. Davydova.

RUSSIAN, per, Vysokomolekulyarnyye
Soyed, Vol II, No 4, 1960, pp 567-571.

ATS-31M2R

ATS/RJ-2427
192,640

Sci
Vol IV, No 7

63-18380

Kozlov, P. V. and Berestneva, G. L.
EFFECT OF STRETCHING ON THE STRUCTURE
AND PROPERTIES OF POLYETHYLENE TEREPHTHA-
LATE FILMS. I. UNIAXIAL STRETCHING OF FILMS.
[26 Apr 63] [25]p. 13 refs.
Order from OTS or SLA \$2.60

63-18380

- I. Title: Polyethylene terephthalate
- I. Kozlov, P. V.
- II. Berestneva, G. L.
- III. Title: Uniaxial ...

Trans. of Vysokomol[ekulyarnye] Soed[ineniya] (USSR)
1960, v. 2, no. 4, p. 591-600.

DESCRIPTORS: *Plastic films, *Polyester plastics,
*Phalates, Ethylenea, Deformation, Mechanical
properties, Tensile properties, Photographic film.

The mechanical properties and structural changes of
polyethyleneterephthalate films subjected to uniaxial
stretching over a broad range of temperature at varying
rates and up to various limits were investigated.
Orientation, relaxation and crystallization processes
taking place in the films being stretched under the
(Materials--Plastics, TT, v. 10, no. 11) (over)

Office of Technical Services

Investigation of Dielectric Losses and
Polarization of Stereoregular IZ Polymethyl
Methacrylate, by G. P. Mikhaylov, T.
I. Dorisova, 8 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol II, No 4, 1960, pp 619-625.

ATB-1543R
ATL/RJ-2425

Sci
Vol IV, No 9
Mar 62

187, 133

Yermolenko, I. N. and Kaputskiy, F. N.
USE OF OXIDES OF NITROGEN FOR THE PREPA-
RATION OF MODIFIED CELLULOSES. [1960] 2p.
Order from ATS \$2.00 ATS-31N48R

Trans. of Vsesoyuznaya Akademiya Nauk (USSR)
1960, v. 2, no. 4, p. 626.

148,642

(Chemistry--Organic, TT, v. 5, no. 7)

61-12661

1. Cellulose--Processing
2. Nitrogen oxides--Chemical reactions

- I. Yermolenko, I. N.
- II. Kaputskiy, F. N.
- III. ATS-31N48R
- IV. Associated Technical Services, Inc., East Orange, N. J.

ATS-RJ-3106

Office of Technical Services

Heterochain Polyamides. XXIII. Interfacial
Polycondensation of BIS (p-carboxyphenyl)
Phenylphosphine Oxide Dichloride With Hexa-
methylenediamine, by V. V. Korshak, et al.

RUSSIAN, per, Vysokomolekulyarnye Soyedineniya,
Vol II, 1960, pp 633-635.

Sci - Chem

Feb 61

ATS 25M:3R

ATS/RT-2432

138,279

Studies in the Field of Coordination Polymers,
IV. Preparation of Polymers Based on
Aromatic BIS (b-Diketones) With Metals,
by V. V. Korshak, Ye. S. Krongauz, V. Ye.
Sheyna, 10 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyed,
Vol II, No 5, 1960, pp 662-672.

ATS-13M3R
ATS/RJ-2462

Sci
Vol IV, No 7
Apr 62

192,642

Heterochain Polyamides. XXIV. Preparation of
Mixed Polyamides at the Phase Interface, by V. V.
Korshak, et al.

RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol II, 1960, pp 673-678.

ATB 870438

ATC/RT-2431

138,277

Sci - Chem

Feb 61

Phosphorus-Containing Polymers. Part 2. An
Application of the Arbuzov Reaction to the
Synthesis of the Polyphosphonates, by K. A.
Petrov, et al.

RUSSIAN, per, Vysokomolekulyarnye Soyedineniya,
AZ Vol II, 1960, pp 685-688.

ATS 3243R

ATS/AJ-243R

Sci - Chem

Feb 61

138, 281

Berlin, A. A., Litgon'kiy, B. I., and Partni, V. P.
DERIVATION AND PROPERTIES OF SOME AROMA-
TIC POLYMERS. 31 Oct 60, 2p. AID rept. 60-76.
Order from LC or SLA mi\$1.80, ph\$1.80 61-15025

Abstract trans. of *Vysokomolekulyarnyye Soyedineniya*
(USSR) 1960, v. 2, no. 5, p. 689-697.
A complete translation is available from ATS, \$15.50,
as ATS-00M43R, 60-22941 [1960] 9p.

A linear polyphenylene polymer was synthesized by the
decomposition of bis-diazotized aromatic amines
(benzidine or benzidine-3, 3'-dicarboxylic acid) in con-
tact with Cu^+ ions. Analysis of the polymers obtained
indicated the presence of -N=N- groups and chlorine
in the structure.

(Chemistry--Organic, IT, v. 5, no. 4)

61-15025

- I. Cyclic compounds--
Polymerization
2. Polymers--Synthesis
- I. Berlin, A. A.
- II. Litgon'kiy, B. I.
- III. Partni, V. P.
- IV. AID-60-76
- V. Air Information Div.,
Washington, D. C.
- VI. AID-246, 70-9

143,316
ATC/RJ-2464

Office of Technical Services

Preparation of High Molecular Aromatic Polyamides
by Interfacial Polycondensation in Acid Media,
by L. B. Sokolov, et al.

RUSSIAN, per, Vysokomolekulyarne Soyedineniya, Vol II, 19
1960, pp 698-703.

Sci - Chem

Feb 61

*00/C

per memo 16 Jan 61

ATC 17/11/43.8

ATC/ATC 2427

Some Rules in Interfacial Copolycondensation,
by L. B. Sokolov, T. L. Kruglova, 7 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyed, Vol II, No 5, 1960, pp 704-709.

ATS-24M43R

ATS/RJ-2435

Sci
Vol IV, No 7
Apr 62

192,655

Effect of the Solvent Capacity of the Organic
Phase in the Interfacial Preparation of
Polyamides, by L. B. Sokolov, et al.

RUSSIAN, per, Vysokomolekulyarna Soedineniya,
Vol II, 1960, pp 710-715.

ATS 1843R

ATS/RT-2404

Sci - Chem

138, 272

Polymerization of Dialdehydes, by Yu. V.
Mitin, Yu. F. Sazanov, 3 pp.

RUSSIAN, per, Vysokomolekulyarnyye
Soyedineniya, Vol II, No 5, 1960,
PP 716-718.

ATS-RJ-2684
ATS-4844R

Sci
Vol IV, No 11
Jun 62

199, 239

Uakov, I. A. and Kusanitsyna, T. A.
THE EFFECT OF DISPERSING AMINATED BEN-
TONITE IN THE MONOMER ON REINFORCEMENT
OF POLY(METHYL METHACRYLATE). Pt. 2 of
Filled Polymers. [1961] 3p.
Order from ATS \$7.00

ATS-68P58R

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2, no. 5, p. 728-730.

An abstract trans. is available from LC or SLA mi \$1.80.
ph \$1.80 in 61-13988, AID-60-80, 7 Nov 60, 2p.

DESCRIPTORS: *Plastics, *Bentonite, *Acrylic resins,
Methyl radicals, Polymers, Binders.

(Materials-Plastics, TT. v. 7, no. 9)

62-12669

- I. Uakov, I. A.
- II. Kusanitsyna, T. A.
- III. Title: Filled...
- IV. ATS-68P58R
- V. Associated Technical Services
Inc., East Orange, N. J.

ATS-RS-3612

Office of Technical Services

IMPROVING THE MECHANICAL AND THERMOMECHANICAL PROPERTIES OF PLASTICS BY USING ACTIVE BENTONITE FILLERS. 7 Nov 60, 2p.
AID rept. 60-80; AD-246 709.
Order from LC or SLA ml\$1.80, ph\$1.80 61-13988

Abstract trans. of Vysokomolekulyarnyye Soyedineniya (USSR) 1960, v. 2, no. 5, p. 728-730 and no. 6, p. 926-930.

Contents:

Filled Polymers.

- II. Effect of the Dispersion of Aminated Bentonite in a Monomer Medium on the Improvement of Poly-methyl Methacrylate, by I. A. Uskov and T. A. Kosnitsyna
- III. Polymerization of Methyl Methacrylate with Dispersed Sodium Bentonite, by I. A. Uskov.

(Materials--Plastics, TT, v. 5, no. 4)

61-13988

1. Plastics--Mechanical properties
2. Bentonite--Applications
I. AID-60-80
II. Air Information Div.,
Washington, D. C.
III. AD-246 709

143,342

Office of Technical Services

Kargin, V. A., Kabanov, V. A., and Zubov, V. P.
THE FORMATION OF ISOTACTIC POLYMETHYL-
METHACRYLATE DURING PHOTOPOLYMERIZATION
IN THE SYSTEM: METHYL METHACRYLATE-ZINC
CHLORIDE. [1961] [7]p. 8 refs.
Order from OTS or SLA \$1.10

62-13837

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2 (no. 5) p. 756-769.

DESCRIPTORS: *Methyl radicals, *Polymers, *Zinc
compounds, *Chlorides, Phase transitions, Micro-
structure, Molecular structure, Polymerization.

It has been shown that an isotactic polymer is pro-
duced in the radical-induced polymerization of methyl
methacrylate at room temperature in the presence of
zinc chloride dissolved in the monomer. The effect of
the conformation of the reactant molecules in the
transitional state on formation of the microstructure
(Chemistry--Organic, IT, v. 7, no. 10) (over)

62-13837

- I. Kargin, V. A.
- II. Kabanov, V. A.
- III. Zubov, V. P.
- IV. Translations, New York

Office of Technical Services

Kozlov, P. V., Makaruk, L. and others
THE EFFECT OF MOLECULAR WEIGHT ON THE
TRANSITION TEMPERATURES OF THE POLYCAR-
BONATES. Pt. 1. of Investigations in the Field of Poly-
carbonates. [1960] 9p.
Order from ATS \$11.95

ATS-43M46R

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 5, p. 770-777.

147,024

(Physics--Molecular, TT, v. 5, no. 5)

61-12371

1. Polymers--Transition temperature
2. Carbonates--Transition temperature
3. Carbonates--Molecular weight
4. Molecular weight--Chemical effects

- I. Kozlov, P. V.
- II. Makaruk, L.
- III. Title: Investigations...
- IV. ATS-43M46R
- V. Associated Technical Services, Inc., East Orange, N. J.

ATS-RJ-2686

Office of Technical Services

Andrianov, K. A., Bochkareva, G. P. and others.
POLYANHYDRIDES FROM PHTHALIC ACIDS AND
MIXED PHTHALICADIPIC ACIDS. [1962] 5p.
Order from ATS \$6.25

ATS-41P60R

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2, no. 5, p. 793-796.

DESCRIPTORS: *Anhydrides, Hydrides, Polymers,
Synthesis, *Phthalic acids, acids, *Adipic acids,
Chemical reactions.

(Chemistry--Organic, TT, v. 8, no. 2)

62-17301

- I. Andrianov, K. A.
- II. Bochkareva, G. P.
- III. ATS-41P60R
- IV. Associated Technical
Services, Inc.,
East Orange, N. J.

ATS-RJ-3616

Office of Technical Services

Volkova, A. I., Koton, M. M., and Savitskaya, M. N.
THE INFLUENCE OF THE CHEMICAL STRUCTURE
OF SOME UNSATURATED ESTERS ON THEIR POLY-
MERIZING ABILITY. [1960] 5p. (3 figs. omitted)
3 refs.

Order from LC or SLA m\$1.80, ph\$1.80 61-10571

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 [no. 5] p. 802-805.

Experiments showed that esters of acrylic acid are
polymerized at a higher rate than isomeric to them
vinyl esters. The introduction into the alkyl group of
an unsaturated ester of chlorine atom, and the length-
ening of alkyl radical slows down the polymerization
process.

(Chemistry--Organic, TT, v. 5, no. 7)

61-10571

1. Acrylic ac. esters--
Polymerization
 2. Vinyl compounds--
Polymerization
 3. Molecular structure--
Chemical effects
- I. Volkova, A. I.
II. Koton, M. M.
III. Savitskaya, M. N.

148,542

Office of Technical Services

18

(NY ~~4485~~ 4486)

First All-Union Conference on Nucleic Acids and
Nucleoproteins, by V. S. Tongur, P. I. Tseymlin.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol II, No 3, 1960, pp 817-822.

*JPRS

Sci/Biol/Chem

28 Jun 60

Korshak, V. V., Frunze, T. M., and Kozlov, L. V.
HETEROCHAIN POLYAMIDES. XXV. INTERFACIAL
PREPARATION OF POLYAMIDES CONTAINING
PIPERAZINE RESIDUES. [1960] 8p.
Order from ATS \$12.45

ATS-93N47R

Trans. of Vysokomolekulyarnye Soyedineniya (USSR)
1960, v. 2, no. 6, p. 838-844.

148,672

(Chemistry--Organic, TT, v. 5, no. 7)

61-12693

- I. Amides--Polymerization
- I. Korshak, V. V.
- II. Frunze, T. M.
- III. Kozlov, L. V.
- IV. Title: Interfacial...
- V. ATS-93N47R
- VI. Associated Technical
Services, Inc., East
Orange, N. J.

ATS-RJ-2675

Office of Technical Services

61-12689

Korshak, V. V., Frunze, T. M., and Kozlov, L. V.
HETEROCHAIN POLYAMIDES. XXVI MIXED POLY-
AMIDES FROM PIPERAZINE AND ALIPHATIC AND
AROMATIC DICARBOXYLIC ACIDS. [1960] 6p.
Order from ATS \$8.55 ATS-94N47R

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 6, p. 845-850.

148,668

1. Amides--Polymerization
2. Carboxylic acids--
Polymerization
- I. Korshak, V. V.
- II. Frunze, T. M.
- III. Kozlov, L. V.
- IV. Title: Mixed...
- V. ATS-94N47R
- VI. Associated Technical
Services, Inc., East
Orange, N. J.

ATS-RS-2676

Office of Technical Services

(Chemistry--Organic, TT, v. 5, no. 7)

Synthesis and Investigation of Unsaturated
Polyamides, by O. Ya. Fedotova, B. P.
Kryzina, 4 pp.

RUSSIAN, per, Vysokomolekulyarnye
Soyedineniya, Vol II, No 6, 1960,
pp 875-878.

ATB-40M-4R

ATS-RJ-2669

Sci
Vol IV, No 11
Jun 62

199, 237

Synthesis and Investigation of High-Molecular-
Weight Tertiary Amines and Quaternary Ammonium
Compounds From Copolymers of 2-Methyl-5-
Vinylpyridine and Various Cross-Linking Agents,
9 pp. 9671176

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol II, No 6, 1960, pp 884-890.

FTD MCL-974/1

Sci - Chem

171,549

20 Oct 61

Synthesis and Investigation of Aromatic
Polyamides, by O. Ya. Fedotova, I. P.
Losev, et al.

RUSSIAN, per, Vysokomolekulyarnyye Soyed,
Vol. II, No 6, 1960, pp 899-903.

HEMATS-41M4R

ATS-RJ-2670
199, 236

Sci.
Vol. IV, No 11
Jun 62

63-16596

- I. Title: Methylmethacrylate
- I. Uskov, I. A.
- II. Title: Polymerization ...

Uskov, I. A.
FILLED POLYMERS. III. POLYMERIZATION OF
METHYLMETHACRYLATE WITH THE DISPERSION
OF SODIUM BENTONITE. [1963] [10]p. 9 refs.
Order from CTS or SLA \$1.10 63-16596

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2, no. 6, p. 926-930.

An abstract trans. is available from LC or SLA
ml\$1.80, pb\$1.80 in 61-13988, AID-60-80, 7 Nov 60, 2p.

DESCRIPTORS: *Methyl radicals, *Acrylic resins,
*Sodium compounds, *Bentonite, Graft polymers,
Polymerization, Fillers.

At the vibration disintegration of air-dry sodium
bentonite blocks in a methylmethacrylate medium,
this monomer is polymerized and polymethylmetha-
crylate is grafted onto the dispersed bentonite particles.
(Materials--Plastics, ITT, v. 10, no. 8) (over)

Office of Technical Services

Electron-Microscope Investigation of the
Structure of Polycarbonates, by L. Makaruk,
P. V. Kozlov, 8 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soed.
Vol. II, No. 6, 1960, pp 931-936

ATS-42M4R

ATS-RJ-2687

197,944

Sci
Vol. IV, No. 1
May 62

(DC-5505).

A. V. Dumanskiy: 80th Birthday,

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol II, No 6, 1960, pp 960-961.

*JPRS

Sci - Biographical

7 Mar 61

A Study of Some Relationships in Interfacial
Polyesterification, by V. V. Korshak, S. V.
Vinogradov, A. S. Lebedeva, 7 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol. II, No. 7, 1960, pp 977-983.

ATS-05M45R

ATS-R5-2677

203, 216

Sci

Jun 62

POLYMER SCIENCE USSR, 1962, VOL. 3, NO. 2,
P. 211-366. Aug 62, 1v.
Order from PP \$100.00/year

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1960,
v. 2, no. 7, p. 989-993, 1026-1030, 1039-1048, 1082-1092,
1103-1108, 1122; no. 8, p. 1157-1161, 1167-1170,
1176-1187, 1193-1195, 1213-1220, 1280-1282, 1287;
no. 9, p. 1297-1300, 1309-1319, 1360-1369, 1375-1382,
1391-1397, 1426-1431. Abstracts are included of
selected articles from v. 3, no. 12 and v. 4, no. 1.

DESCRIPTORS: *Polymers, Chemistry, *Amides,
Condensation reactions, *Ethylenes, Reaction kinetics,
Electrical conductance, *Acrylic resins, *Benzenes,
*Isoprenes, Polymerization, Copolymerization, *Radi-
ation chemistry, *Phenyl radicals, *Acetylenes, *Acryloni-
triles, *Propenes, *Phenol-formaldehyde resins, Anisot-
ropy, Degradation, *Styrenes, *Electron microscopy,
(Chemistry-Organic, TT, v. 10, no. 4) (over)

63-17527-2

I. Pergamon Press, Inc.,
New York

Office of Technical Services

Tszen, Khan-min and Kolesnikov, G. S.
CARBON-CHAIN POLYMERS AND COPOLYMERS.
XXV. THE ACTION OF CHLORIDES OF UNSATURATED ACIDS ON POLYVINYL ALCOHOL. [1960]
6p. (refs. 4 figs. omitted)
Order from LC or SLA mi\$1.80, ph\$1.80 61-10703

Trans. of Vysokomolekulyarnyye Soedineniya (USSR)
1960, v. 2 [no. 7] p. 1010-1012.

Properties of polyvinyl alcohol can be changed by its treatment with chlorides of unsaturated acids. (See also 61-12764)

(Chemistry--Organic, TT, v. 5, no. 11)

61-10703

1. Polymers--Synthesis
2. Copolymerization--Analysis
3. Vinyl alcohol--Polymerization
4. Chlorides--Chemical reactions

- I. Tszen, Khan-min
- II. Kolesnikov, G. S.
- III. Title: Action...

Office of Technical Services

Some Properties of Aromatic and Arylaliphatic
polyamides Prepared by Interfacial Poly-
condensation. Part I., by O. Ya. Fedotova,
M. I. Kerber, I. P. Losev, 6 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol II, No 7, 1960, pp 1020-1025.

ATS-07N45R

ATS-RI-2672

202,219

Sci

Jan 62

Investigation of the Fine Molecular Structure
of Oriented Regenerated Cellulose Fibres
by N. V. Mikha'lov.

RUSSIAN, per, Vysokomolekulyarnye Soedineniya,
Vol II, No 7, 1960, pp 1031-1038.

ILL RTS 2114

Sci - Eng Phys
Mar 63

223,617

Kinetic Study of Interfacial Polycondensation by
Electrical Conductivity Measurements, by Ye. Z.
Faynberg, N. V. Mikhaylov, 5 pp.

RUSSIAN, per, Vysokomolekulyarnyye Soyedineniya,
Vol II, No 7, 1960, pp 1039-1044.

ATS-0845R

ATS-R3-2673

203,218

Sci

Jun 62

Tsvetkov, V. N., Skazka, V. S., and Krivoruchko, N. [Ya].

62-13836

RELATION BETWEEN THE MOLECULAR WEIGHT AND INTRINSIC VISCOSITY OF STEREOREGULAR POLYMETHYL METHACRYLATE FRACTIONS IN BENZENE. [1961] [6]p. 8 refs.
Order from OTS or SLA \$1.10

62-13836

Trans. of Vysokomolekulyarnye Soedineniya (USSR) 1960, v. 2 [no. 7] p. 1045-1048.

DESCRIPTORS: *Benzenes, *Polymers, Methyl radicals, Methanes, Acrylic resins, Molecular weight, Viscosity, Stereochemistry.

A study was made of the scattering of light by various fractions of isotactic and syndiotactic PMMA in acetone and ethyl acetate, and the intrinsic viscosities of these fractions in benzene have been determined. It has been shown that the variation of the intrinsic viscosity of the (Chemistry--Organic, TT, v. 8, no. 2) (over)

- I. Title: Stereoregular polymers
- I. Tsvetkov, V. N.
- II. Skazka, V. S.
- III. Krivoruchko, N. Ya.
- IV. Translations, New York

Office of Technical Services

Yeskin, V. Ye.

ASYMMETRY OF CRITICAL OPALESCENCE IN
SOLUTION OF POLYSTYRENE IN CYCLOHEXANE,
tr. by Carl Demrick. [1960] 9p. (equations 3 figs.
1 table omitted) 13 refs.

Order from OTS or SLA \$1.10

61-15283

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 7, p. 1049-1055.

DESCRIPTORS: *Polymer solutions, Styrenes,
Polymers, Cyclohexanes, Optics.

(Chemistry--Physical, TT, v. 6, no. 1)

61-15283

I. Yeskin, V. Ye.

101780

Office of Technical Services

Kallistov, O. V. and Korneeva, E. V.
A STUDY OF THE FLOW BIREFRINGENCE OF
ISOTACTIC POLYSTYRENE FILMS. [1961] [9]p.
7 refs.

Order from OTS or SLA \$1.10

62-13835

Trans. of Vysokomolekulyarnye Soedineniya (USSR)
1960, v. 2 [no. 7] p. 1056-1062.

DESCRIPTORS: *Films, *Styrenes, *Polymers,
Elasticity, Crystallization, Temperature, Photo-
elasticity, *Refractive index, Optics.

Flow birefringence and the photoelastic effect have
been found to vary with temperature in films of
stereoregular (isotactic) polystyrene in the highly
elastic state, due to the appearance of the initial
phase of crystallization. The photoelastic constant
has been found to vary with temperature in amor-
(Physics--Solid State, TT, v. 7, no. 11) (over)

62-13835

I. Kallistov, O. V.
II. Korneeva, E. V.
III. Translations, New York

Office of Technical Services

Arbuzova, I. A. and Sultanov, K.
POLYMERIZATION OF DIVINYL ACETALS. [1960]
5p.

Order from ATS \$8.50

ATS-28M47R

Trans of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2, no. 7, p. 1077-1081.

148,666

(Chemistry--Organic, TT, v. 5, no. 7)

61-12687

- I. Acetals--Polymerization
- I. Arbuzova, I. A.
- II. Sultanov, K.
- III. ATS-28M47R
- IV. Associated Technical
Services, Inc., East
Orange, N. J.

ATS-RJ-2685

Office of Technical Services

Spirin, Yu. L., Polyakov, D. K. and others.
THE ETHYLLITHIUM INITIATED POLYMERIZA-
TION AND COPOLYMERIZATION OF ISOPRENE,
[1960] 12p. 11 refs.
Order from LC or SLA m\$2.40, ph\$3.30 61-10731

Trans. of Vysokomolekulyarnyye Soyedineniya (USSR)
1960, v. 2 [no. 7] p. 1062-1092.

151837

(Chemistry--Organic, TT, v. 5, no. 9)

61-10731

1. Isoprene--Polymerization
 2. Copolymerization
 3. Lithium compounds (Organic)--
Catalytic properties
- I. Spirin, Yu. L.
 - II. Polyakov, D. K.

Office of Technical Services

Synthesis of Unsaturated Polyamides and
Polyesters by Polycondensation at the Phase
Interface, by G. S. Kolesnikov, A. S.
Malosnitskiy, 3 pp.

RUSSIAN, per, Vysokomolekulyarnye Soyedineniya,
Vol. II, No 7, 1960, pp 1119-1121.

ATS-06M45R ATS-RJ-21674

Sci

203, 214

Jun 62